



North Carolina Department of Environment and Natural Resources  
Division of Air Quality

**Di(2-ethylhexyl)phthalate (DEHP)**

CAS 117-81-7

**Current North Carolina AAL = 0.03 mg/m<sup>3</sup> (24 hour, chronic toxicant)**

**AAL Documentation**

The pre-1989 ACGIH TLV value for DEHP was 5 mg/m<sup>3</sup> (equivalent to 0.3 PPM).

A factored TLV approach was used to derive a 24 hour chronic AAL for DEHP.

In accordance with guidance provided by the North Carolina Academy of Sciences (1986/1987), the following uncertainty factors were used:

- Population variability : Factor of 10
- Time conversion (8 hour work day to continuous exposure): Factor of 4.
- Experimental uncertainty associated with chronic studies: Factor of 2.
- Severity of effect: Factor of 2 (DEHP is a confirmed animal carcinogen with unknown relevance to humans)

**Total multiplicative uncertainty factor = 10 x 4 x 2 x 2 = 160**

$$\text{mg/m}^3 \text{ DEHP} = \frac{5 \text{ mg/m}^3}{160}$$

$$= 0.03 \text{ mg/m}^3$$

This information has been reconstructed using the decision matrix established by the North Carolina Academy of Sciences Air Toxics Panel, September, 1986.